7.0 EXCESS EMISSIONS DOCUMENTATION

IDAPA 58.01.01.130-136 requires that the permittee comply with excess emissions requirements of for startup, shutdown, scheduled maintenance, safety measures, upset, and breakdowns. This section is fairly self-explanatory. Teton Sales notes the following:

Subsections 133.02, 133.03, 134.04, and 134.05 are not specific applicable requirements. These provisions of the *Rules* only apply if the permittee anticipates requesting consideration under subsection 131.02 of the *Rules* to allow DEQ to determine if an enforcement action to impose penalties is warranted. Section 131.01 states "*. . . The owner or operator of a facility or emissions unit generating excess emissions shall comply with Sections 131, 132, 133.01, 134.01, 134.02, 134.03, 135, and 136, as applicable. If the owner or operator anticipates requesting consideration under Subsection 131.02, then the owner or operator shall also comply with the applicable provisions of Subsections 133.02, 133.03, 134.04, and 134.05.*" Failure to prepare or file procedures pursuant to sections 133.02 and 134.04 is not a violation of the *Rules* in and of itself, as stated in subsections 133.03.a and 134.06.b. Therefore, since the permittee has the option to follow the procedures in subsections 133.02, 133.03, 134.04, and 134.05; and is not compelled to, the subsections are not considered applicable requirements for the purpose of this permit and are not included as such.

To date Teton Sales has not observed or recorded excess emissions. Should excess emissions occur in the future, Teton Sales will address them as appropriate in accordance with the regulations.

8.0 AMBIENT AIR IMPACT ANALYSIS

This section describes the estimated ambient air quality impact from Teton Sales. Air dispersion modeling has been conducted for this facility in order to demonstrate compliance with National Ambient Air Quality Standards (NAAQS) for criteria pollutants in 40 CFR 51 and Idaho Ambient Air Quality Standards in IDAPA 58.01.01.575. Toxic air pollutants were also evaluated against threshold emissions levels (ELs), and ambient concentrations for those pollutants exceeding their respective ELs were modeled and compared to the Acceptable Ambient Concentrations (AAC) or Acceptable Ambient Concentrations for Carcinogens (AACC) given in IDAPA 58.01.01.585 and 586.

Modeling was generally conducted in accordance with EPA's *Guideline on Air Quality Models* and IDEQ's *Air Quality Modeling Guideline*.

A description of the facility is given in Section 8.1. Details of model inputs and results are given in Section 8.2. A description of the modeling analysis summary is given in Section 8.3.

8.1 FACILITY DESCRIPTION

The facility is a wood products coating plant located in Canyon County, Idaho at Universal Transverse Mercator (UTM) Zone 11 coordinates of 523^{878} km east, 4834^{928} km north.

Emission units at the facility include the following:

- one spray booth
- two roll coaters
- five fan coaters
- two printers
- eight oven heaters
- five space heaters

Storage tanks and fugitive emissions were not included in the modeling. The facility is a source of sulfur dioxides (SO_X), nitrogen oxides (NOx), volatile organic compounds (VOC), carbon monoxide (CO), and particulate matter (PM) from natural gas fuel combustion; and a source of PM from the spray booth. Toxics are also emitted from the coating operations. Total lead emissions from the facility are well below the 0.6 tpy threshold requiring modeling in accordance with Table 1 of IDEQ's modeling guidelines.

Table 8.1-1
Emission Units and Stack Parameters (Actual)

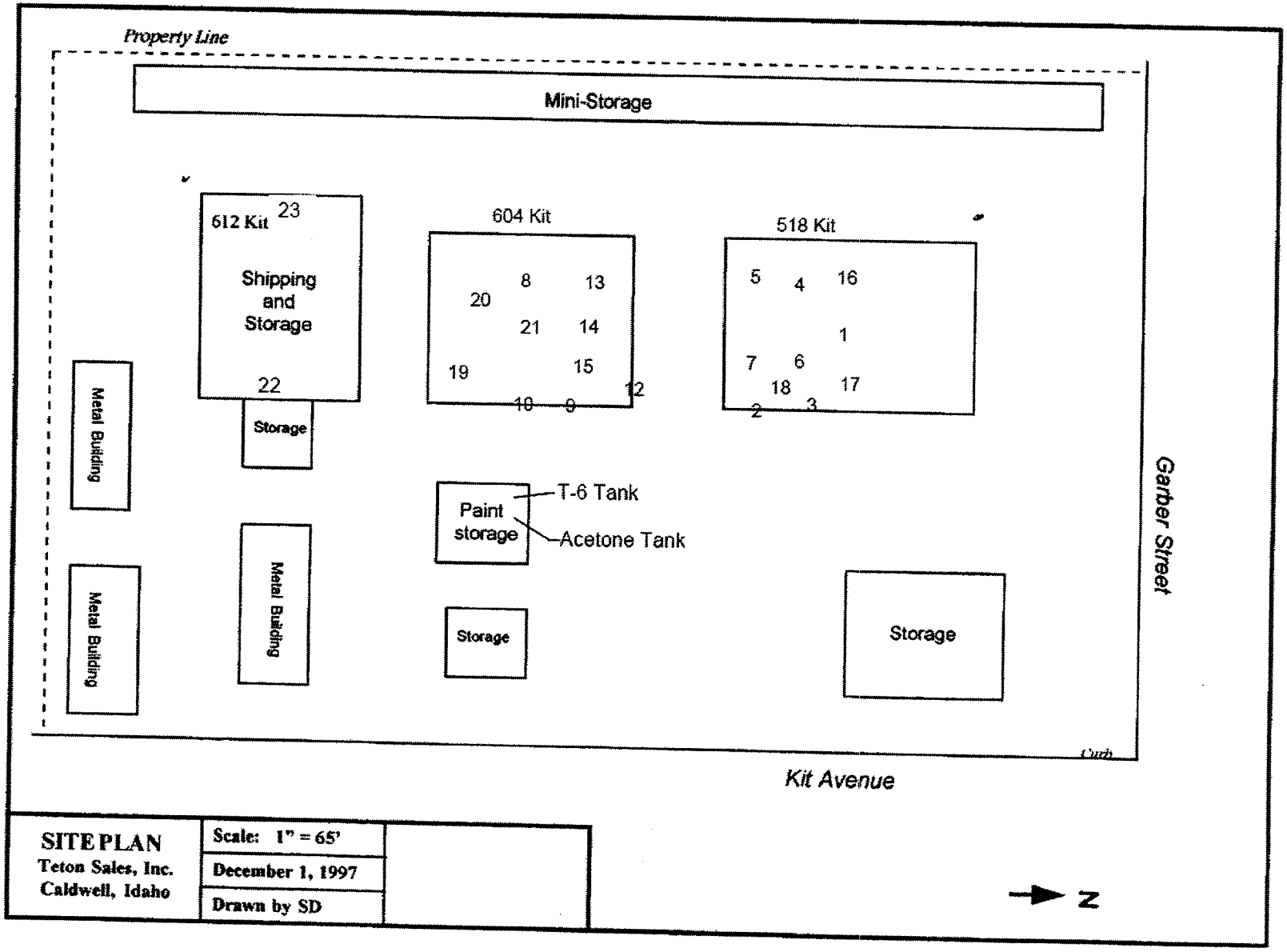
Unit No.	Stack ID	Type	Exit Direction (vert., horz., down)	Stack Covered or Capped? (y/n)	Height above ground (ft)	Inside Diameter (ft)	Velocity (ft/sec)	Temp. (°F)
1	Door Coating Spray Booth	Point	Vertical	N	30	2	132.70	70
2	Drying Oven – 518 Kit	Point	Horizontal	N	5.25	3	11.80	125
3	Roll Coater # 2[2], Fan Coater # 5[2]	Point	Horizontal	N	4	3	11.80	70
4	Oven Heater # 1- 140,000 Btu/hr	Point	Vertical	Y[3]	20	0.42	6.02	280
5	Oven Heater # 2 - 140,000 Btu/hr	Point	Vertical	Y[3]	20	0.42	6.02	280
6	Oven Heater # 3 - 140,000 Btu/hr	Point	Vertical	Y[3]	20	0.42	6.02	280
7	Oven Heater # 4 - 140,000 Btu/hr	Point	Vertical	Y[3]	20	0.42	6.02	280
8	Space Heater # 1 - 100,000 Btu/hr	Point	Vertical	Y[3]	20	0.667	2.39	190
9	Space Heater # 2 - 100,000 Btu/hr	Point	Vertical	Y[3]	20	0.667	2.39	175
10	Space Heater # 3 - 100,000 Btu/hr	Point	Vertical	Y[3]	20	0.667	2.39	250
11	Fan Coater # 1, Fan Coater # 4	Point	Vertical	N	20	2	26.54	70
12	Fan Coater # 2	Point	Vertical	N	20	2	26.54	70
13	Fan Coater # 3[2], Printer # 1[2], Printer # 2[2], Roll Coater # 1[2]	Point	Horizontal	N	8	2.67	14.89	70
14	Drying Oven – 604 Kit	Point	Horizontal	N	4.58	2	26.54	125
15	Oven Heater # 5 - 140,000 Btu/hr	Point	Vertical	Y[3]	20	0.42	6.02	280
16	Oven Heater # 6 - 140,000 Btu/hr	Point	Vertical	Y[3]	20	0.42	6.02	280
17	Oven Heater # 7 - 140,000 Btu/hr	Point	Vertical	Y[3]	23	0.42	6.02	280
18	Oven Heater # 8 - 140,000 Btu/hr	Point	Vertical	Y[3]	23	0.42	6.02	280
19	Space Heater # 4 - 100,000 Btu/hr	Point	Vertical	Y[3]	20	0.667	2.39	190
20	Space Heater # 5 - 100,000 Btu/hr	Point	Vertical	Y[3]	23	0.667	2.39	190

[1]Relative physical locations by reference number are shown on figure 8.1-1. Wall vents are reference numbers 2, 3, 10 and 12, all others exhaust through the roof.

[2]This piece of equipment does not vent to the atmosphere. The emission point is an area vent that draws air from the vicinity of each of these pieces of equipment.

[3]The cover is slotted symmetrically around the circumference to allow equal dispersion of emissions in all directions

Figure 8.1-1 Teton Sales Stack Locations



8.1.1 SCREEN3 AND AGGREGATE OUTPUT DATA SHEETS

Criteria Pollutants NAAQS Compliance - Oven/Heaters

Pollutant Emission Rates

Criteria Pollutant	SCREEN3 Concentration (ug/m^3/lb/hr)	Persistence Factors (3 hr)	Persistence Factors (8 hr)	Persistence Factors (24 hr)	Persistence Factors (annual)	Pollutant Emission Rate (lb/hr)
PM-10	2,685	na	na	0.4	0.08	0.012
NO_x	2,685	na	na	na	0.08	0.159
SO_x	2,685	0.9	na	0.4	0.08	0.0010
CO	2,685	na	0.7	na	na	0.134

Actual Pollutant Concentrations

Criteria Pollutant	1-hr Average Actual (ug/m^3)	3-hr Average Actual (ug/m^3)	8-hr Average Actual (ug/m^3)	24-hr Average Actual (ug/m^3)	Annual Average Actual (ug/m^3)
PM-10	na	na	na	12.96	2.59
NO_x	na	na	na	na	34.15
SO_x	na	2.30	na	1.02	0.205
CO	0.13	na	251.85	na	na

Background Concentrations

Criteria Pollutant	1-hr Average Background (ug/m^3)	3-hr Average Background (ug/m^3)	8-hr Average Background (ug/m^3)	24-hr Average Background (ug/m^3)	Annual Average Background (ug/m^3)
PM-10	na	na	na	130	36.7
NO_x	na	na	na	na	40
SO_x	na	374	na	120	18.3
CO	11,450	na	5,130	na	na

Total Concentrations (Actual + Background)

Criteria Pollutant	Total 1-hr Average (ug/m^3)	Total 3-hr Average (ug/m^3)	Total 8-hr Average (ug/m^3)	Total 24-hr Average (ug/m^3)	Total Annual Average (ug/m^3)	Total 24-hr/Annual Average for both Oven/Heater and Spray Booth (ug/m^3)
PM-10	na	na	na	143.0	39.3	144.9/39.7
NO_x	na	na	na	na	74.2	
SO_x	na	376.3	na	121.0	18.5	
CO	11,450.1	na	5,381.9	na	na	

Concentration Standards (NAAQS)

Criteria Pollutant	1-hr Standard (ug/m^3)	3-hr Standard (ug/m^3)	8-hr Standard (ug/m^3)	24-hr Standard (ug/m^3)	Annual Standard (ug/m^3)
PM-10	na	na	na	150	50.0
NO_x	na	na	na	na	100
SO_x	na	1,300	na	365	80
CO	40,000	na	10,000	na	na

Pollutant Emission Rates From MathCad

Criteria Pollutant	Pollutant Emission Rate From 518 Kit (lb/hr)	Pollutant Emission Rate From 604 Kit (lb/hr)	Total Pollutant Emission Rate (lb/hr)
PM-10*	6.41E-03	5.66E-03	1.21E-02
NO_x	8.40E-02	7.50E-02	1.59E-01
SO_x	5.06E-04	4.47E-04	9.53E-04
CO	7.10E-02	6.30E-02	1.34E-01

*PM from MathCad is assumed to be 100% PM-10

PM and TAPs Modeling Calculations - Door Coating Line

Door Coating Line Controlled PM Emissions

Emission Source	Product	Max. Application Rate (gal/hr)	Density of Mixture (lb/gal)[a]	Wt. Fraction Solids (lb PM/lb Mixture)[b]	Transfer Efficiency (%)	Control Efficiency (%)	PM Emissions (lb/hr)	PM Emissions (T/yr)[b]
Door Coating Line Spray Booth	White Water-Based Enamel (Product No. 660-20W020-472)	18	10.66	0.4774	50	99	0.46	1.51

[a]From MSDS/RCR

[b]Based on 6600 hr/yr.

Door Coating Line Uncontrolled PM Emissions

Emission Source	Product	Max. Application Rate (gal/hr)	Density of Mixture (lb/gal)	Wt. Fraction Solids (lb PM/lb Mixture)	Transfer Efficiency (%)	PM Emissions (lb/hr)	PM Emissions (T/yr)[a]
Door Coating Line Spray Booth	White Water-Based Enamel (Product No. 660-20W020-472)	18	10.66	0.4774	50	45.80	200.61

[a]Based on 8760 hr/yr.

NAAQS Parameters

Source Type	Point
Emission Rate (g/s)[a]	0.126
Stack Height (m)	7.925
Stack Inside Diameter (m)	0.42
Stack Exit Velocity (m/s)	85.1619
Stack Gas Exit Temperature (K)	293
Ambient Air Temperature (K)	293
Receptor Height (m)	0
Urban/Rural	Rural
Building Height (m)	4.88
Min Horiz Building Height (m)	24.38
Max Horiz Building Height (m)	38.4

[a]Emission rate based on a 1ug/m^3 concentration.

Controlled Emissions for PM/PM-10 NAAQS Compliance

SCREEN3 Concentration (ug/m^3/lb/hr)	Persistence Factors (24 hr/annual)	PM Emission Rate (lb/hr)	24-hr Average (ug/m^3)	Annual Average (ug/m^3)	24-hr/annual Background Concentrations	Total PM 24-hr Average (ug/m^3)[a]	Total PM Annual Average
10.20	0.4/0.08	0.46	1.88	0.38	130/36.7	131.88	37.08

[a]Total PM 24 hr/annual Average = (Screen3 Concentration*Persistence Factor*PM Emission Rate)+Background Concentration

Controlled Emissions for Formaldehyde NAAQS Compliance

SCREEN3 Concentration (ug/m^3/lb/hr)	Persistence Factor	Formaldehyde Emission Rate (lb/hr)[a]	Total 24-hr Concentration (ug/m^3)[b]	AAC 24-hr Limit (ug/m^3)
10.20	0.4	0.013	0.05	77

[a]From Paint Booth Emission Table

[b]Total 24 hr Concentration = (Screen3 Concentration*Persistence Factor*PM Emission Rate)

Screen 3 Parameters

Source Type	Point
Emission Rate (g/s)[a]	0.126
Stack Height (m)	7.0104
Stack Inside Diameter (m)	0.9144
Stack Exit Velocity (m/s)	3.593
Stack Gas Exit Temperature (K)	293
Ambient Air Temperature (K)	293
Receptor Height (m)	0
Urban/Rural	Rural
Building Height (m)[b]	7.315
Minimum Horizontal Building Height (m)[b]	14.63
Maximum Horizontal Building Height (m)[b]	24.384

[a]Emission rate based on a 1ug/m^3 concentration.
[b]Worst Case

Controlled Emissions for Toluene NAAQS Compliance

SCREEN3 Concentration (ug/m^3/lb/hr)	Persistence Factor	Toluene Emission Rate (lb/hr)[a]	Total 24-hr Concentration (ug/m^3)[b]	AAC 24-hr Limit (ug/m^3)
1,031	0.4	39.33	16,220	18,750

[a]From Paint Booth Emission Table
[b]Total 24 hr Concentration = (Screen3 Concentration*Persistence Factor*Toluene Emission Rate)

TAPs Inventory (lb/hr)

Pollutant	Spray Booth	Fan Coater # 5	Roll Coater # 2	Fan Coater # 1	Fan Coater # 2	Fan Coater # 3	Fan Coater # 4	Roll Coater # 1	Printer # 1	Printer # 2	Acetone Storage Tank	T-6 Storage Tank	Total (lb/hr)	EL (lb/hr)
Ammonia	0.054	0	0	0	0	0	0	0	0	0	0	0	0.05	1.2
1,2-Ethanediol	0.044	0	0	0	0	0	0	0	0	0	0	0	0.04	0.846
Free Formaldehyde, Maximum	0.013	0	0	0	0	0	0	0	0	0	0	0	0.01	0.00051
Toluene	0	11.67	1.17	11.67	10.75	14.8	10.75	1.17	0.009	0.017	0	0.002	62.01	25
Methyl ethyl ketone	0	3.84	0.52	3.84	9.86	2.22	9.86	0.52	0	0	0	0	30.66	39.3
Methyl Isobutyl Ketone	0	0.49	0.001	0.49	1.21	2.08	1.21	0.001	0.086	0.172	0	0.0003	5.74	13.7
Xylene	0	1	0	1	0.45	0.05	0.45	0	0.008	0.016	0	0	2.97	29
Methanol	0	0.33	0.001	0.33	0.8	1.38	0.8	0.001	0.055	0.109	0	0.0009	3.81	17.3
Acetone	0	12.88	9.35	12.88	4.7	9.55	4.7	9.35	0.443	0.885	0.015	0.011	64.76	119
Isopropanol	0	2.21	0.17	2.21	0.9	1.37	0.9	0.17	0.091	0.182	0	0	8.20	65.3
Ethyl benzene	0	0.19	0	0.19	0.09	0.01	0.09	0	0	0.0004	0	0	0.57	21.75
Cumene	0	0.09	0	0.09	0	0	0	0	0	0	0	0	0.18	16.3
Ethyl acetate	0	0	0.001	0	0	0	0	0.001	0.013	0.026	0	0	0.04	93.3
2-Butoxyethanol	0	0	0	0	0	0.01	0	0	0.004	0.008	0	0	0.02	8
Isobutyl acetate	0	0	0	0	1.79	0.25	0	0	0.017	0.033	0	0	2.09	46.7
Butanol	0	0	0	0	0	0	0	0	0.017	0.033	0	0	0.05	47.3
Butyl acetate	0	0	0	0	0	0	0	0	0.920	1.839	0	0	2.76	10

SCREEN3 Downwash Data for Door Coating Spray Booth

Structure[a]	Physical Description	Width (ft)	Length (ft)	Height (ft)	Lesser of the height or width(ft)	Area of Potential Influence (5*Lesser of H or W) (ft)	Actual Distance from Stack to Structure (ft)	Is Downwash Applicable (Yes or No)[b]
518 Kit- Coating Operations	518 Kit	80	130	20	20	100	0	Y
604 Kit-Coating Operations	604 Kit	80	106	20	20	100	102	N
612 Kit - Shipping and Storage	612 Kit	60	100	20	20	100	228	N
612 Kit - Storage Wing	Attached to and immediately east of building	30	42	20	20	100	252	N
Mini-Storage	Parallel and adjacent to west property line	30	465	14	14	70	94	N
Metal Building 1	Immediately South of 612 Kit Avenue	32	72	16	16	80	358	N
Metal Building 2	Immediately west of metal building at southeast corner of property	30	70	16	16	80	341	N
Metal Building 3	Immediately east of 612 Kit Avenue and north of Metal Building 2	28	80	14	14	70	268	N
Paint Storage	Immediately east of 604 Kit Avenue	20	56	10	10	50	171	N
Storage 1	Immediately east of paint storage building	35	42	14	14	70	203	N
Storage 2	Immediately est of 518 Kit, near northeast corner of property	48	80	24	24	120	125	N

[a]The numbering/labeling system is taken from Teton's SITE PLAN.

[b]Downwash is applicable if the Area of Potential Influence is larger than the Actual Distance.

SCREEN3 Downwash Data for Oven and Building Heaters (Fuel Burning Equipment Exhaust)[a]

Structure[b]	Physical Description	Width (ft)	Length (ft)	Height (ft)	Lesser of the height or width(ft)	Area of Potential Influence (5 X Lesser of H or W) (ft)	Actual Distance from Stack to Structure (ft)[c]	Is Downwash Applicable (Yes or No)[d]
518 Kit- Coating Operations	518 Kit	80	130	20	20	100	0	Y
604 Kit-Coating Operations	604 Kit	80	106	20	20	100	0	Y
612 Kit - Shipping and Storage	612 Kit	60	100	20	20	100	32.5	Y[e]
612 Kit - Storage Wing	Attached to and immediately east of building	30	42	20	20	100	57	Y[e]
Mini-Storage	Parallel and adjacent to west property line	30	465	14	14	70	57	Y
Metal Building 1	Immediately South of 612 Kit Avenue	32	72	16	16	80	155	N
Metal Building 2	Immediately west of metal building at southeast corner of property	30	70	16	16	80	138	N
Metal Building 3	Immediately east of 612 Kit Avenue and north of Metal Building 2	28	80	14	14	70	82	N
Paint Storage	Immediately east of 604 Kit Avenue	20	56	10	10	50	37	Y
Storage 1	Immediately east of paint storage building	35	42	14	14	70	98	N
Storage 2	Immediately est of 518 Kit, near northeast corner of property	48	80	24	24	120	90	Y

[a]The worst case stacks are Ref # 18, Ref # 19 and #22 (one worst-case stack from each of the combustion buildings), together they have an Area of Potential Influence to effect the most buildings (518 Kit, 604 Kit, 612 Kit + Storage Wing, Storage 2 and Mini Storage). Each one of these buildings dimensions was modeled with a combination of the worst case combustion stack parameters possible, a flow rate of 50 acfm, stack height of 20 ft, temperature of 175 °F, and a stack diameter of 0.667 feet (a stack diameter of 5.48 meters was used in SCREEN3 to give a stack exit velocity of 0.001 m/s).

[b]The numbering/labeling system is taken from Teton's SITE PLAN.

[c]Actual distance was measured from the building in question to which ever worst case stack was closer between 518 Kit, 604 Kit or 612 Kit. If any of the buildings in question fell within the Area of Potential Influence then it was modeled with the worst case stack parameters.

[d]Downwash is applicable if the Area of Potential Influence is larger than the Actual Distance.

[e]612 Kit shipping and storage and 612 storage wing were modeled as one building, 20ft x 142ft x 60ft.

SCREEN3 Downwash Data for Coatings Process (TAPs)[a]

Structure[b]	Physical Description	Width (ft)	Length (ft)	Height (ft)	Lesser of the height or width(ft)	Area of Potential Influence (5*Lesser of H or W) (ft)	Actual Distance from Stack to Structure (ft)[c]	Is Downwash Applicable (Yes or No)[d]
518 Kit- Coating Operations	518 Kit	80	130	20	20	100	0	Y
604 Kit-Coating Operations	604 Kit	80	106	20	20	100	0	Y
612 Kit - Shipping and Storage	612 Kit	60	100	20	20	100	32.5	Y[e]
612 Kit - Storage Wing	Attached to and immediately east of building	30	42	20	20	100	57	Y[e]
Mini-Storage	Parallel and adjacent to west property line	30	465	14	14	70	57	Y
Metal Building 1	Immediately South of 612 Kit Avenue	32	72	16	16	80	155	N
Metal Building 2	Immediately west of metal building at southeast corner of property	30	70	16	16	80	138	N
Metal Building 3	Immediately east of 612 Kit Avenue and north of Metal Building 2	28	80	14	14	70	82	N
Paint Storage	Immediately east of 604 Kit Avenue	20	56	10	10	50	37	Y
Storage 1	Immediately east of paint storage building	35	42	14	14	70	98	N
Storage 2	Immediately est of 518 Kit, near northeast corner of property	48	80	24	24	120	90	Y

[a]The worst case stacks are Ref # 3 and Ref # 10 (one worst-case stack from each of the coating buildings), together they have an Area of Potential Influence to effect the most buildings (518 Kit, 604 Kit, 612 Kit + Storage Wing, Storage 2 and Mini Storage). Each one of these buildings dimensions was modeled with a combination of the worst case coating process stack parameters possible, a flow rate of 5000 acfm, temperature of 70 °F, and a stack diameter of 3 feet. The stack height was modeled at 23 feet to take into account the proposed wall vent stack height increases.

[b]The numbering/labeling system is taken from Teton's SITE PLAN.

[c]Actual distance was measured from the building in question to which ever building stack was closer between 518 Kit, 604 Kit and 612 Klt. If any of the buildings in question fell within the Area of Potential Influence then it was modeled with the worst case stack parameters.

[d]Downwash is applicable if the Area of Potential Influence is larger than the Actual Distance.

[e]Modeled as one building, 20ft x 142ft x 60ft.

Stack/Wall Vent Parameters and Locations - Teton Sales

Reference Number[1]	Emission Point	Location	Flow Rate (acfm)	Exhaust Temperature (°F)	Shape	Orientation	Covered (y/n)	Height Above Ground (ft)	Diameter (ft)	Area (ft^2)	Exit Velocity (ft/sec)
1	Door Coating Spray Booth	518 Kit	25000	70	Circular	Vertical	N	30	2	3.14	132.70
2	Drying Oven	518 Kit	5000	125	Circular	Horizontal	N	5.25	3	7.07	11.80
3	Roll Coater # 2[2], Fan Coater # 5[2]	518 Kit	5000	70	Circular	Horizontal	N	4	3	7.07	11.80
4	Oven Heater # 1- 140,000 Btu/hr	518 Kit	50	280	Circular	Vertical	Y[3]	20	0.42	0.14	6.02
5	Oven Heater # 2 - 140,000 Btu/hr	518 Kit	50	280	Circular	Vertical	Y[3]	20	0.42	0.14	6.02
6	Oven Heater # 3 - 140,000 Btu/hr	518 Kit	50	280	Circular	Vertical	Y[3]	20	0.42	0.14	6.02
7	Oven Heater # 4 - 140,000 Btu/hr	518 Kit	50	280	Circular	Vertical	Y[3]	20	0.42	0.14	6.02
16	Space Heater # 1 - 100,000 Btu/hr	518 Kit	50	190	Circular	Vertical	Y[3]	20	0.667	0.35	2.39
17	Space Heater # 2 - 100,000 Btu/hr	518 Kit	50	175	Circular	Vertical	Y[3]	20	0.667	0.35	2.39
18	Space Heater # 3 - 100,000 Btu/hr	518 Kit	50	250	Circular	Vertical	Y[3]	20	0.667	0.35	2.39
8	Fan Coater # 1, Fan Coater # 4	604 Kit	5000	70	Circular	Vertical	N	20	2	3.14	26.54
9	Fan Coater # 2	604 Kit	5000	70	Circular	Vertical	N	20	2	3.14	26.54
10	Fan Coater # 3[2], Printer # 1[2], Printer # 2[2], Roll Coater # 1[2]	604 Kit	5000	70	Circular	Horizontal	N	8	2.67	5.60	14.89
12	Drying Oven	604 Kit	5000	125	Circular	Horizontal	N	4.58	2	3.14	26.54
13	Oven Heater # 5 - 140,000 Btu/hr	604 Kit	50	280	Circular	Vertical	Y[3]	20	0.42	0.14	6.02
14	Oven Heater # 6 - 140,000 Btu/hr	604 Kit	50	280	Circular	Vertical	Y[3]	20	0.42	0.14	6.02
15	Oven Heater # 7 - 140,000 Btu/hr	605 Kit	50	280	Circular	Vertical	Y[3]	23	0.42	0.14	6.02
21	Oven Heater # 8 - 140,000 Btu/hr	606 Kit	50	280	Circular	Vertical	Y[3]	23	0.42	0.14	6.02
19	Space Heater # 4 - 100,000 Btu/hr	604 Kit	50	190	Circular	Vertical	Y[3]	20	0.667	0.35	2.39
20	Space Heater # 5 - 100,000 Btu/hr	604 Kit	50	190	Circular	Vertical	Y[3]	23	0.667	0.35	2.39

[1]Relative physical locations by reference number are shown on Teton Stack Locations Site Plan. Wall vents are reference numbers 2, 3, 10 and 12. All others exhaust through the roof.
[2]This piece of equipment does not vent to the atmosphere. The emission point is an area vent that draws air from the vicinity of each of these pieces of equipment.
[3]The cover is slotted symmetrically around the circumference to allow equal dispersion of emissions in all directions

Boundary Locations of Worst Case Fuel Burning Stacks

Reference Number	Emission Point	Location	Distance from Nouth Property Line (m)	Distance from South Property Line (m)	Distance from East Property Line (m)	Distance from West Property Line (m)
18	Space Heater # 3 - 100,000 Btu/hr	518 Kit	54.3	104.2	52.1	44.5
19	Space Heater # 4 - 100,000 Btu/hr	604 Kit	99.1	59.4	59.4	39.6